



RONSTAR EC250

Version 2 / ZA
102000016887

1/11
Revision Date: 03.07.2017
Print Date: 03.07.2017

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name RONSTAR EC250
Product code (UVP) 79397992

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use Herbicide

1.3 Details of the supplier of the safety data sheet

Supplier Bayer (Pty) Ltd.
27 Wrench Road, P.O. Box 143
1600 Isando
South Africa
Telephone +27 (011) 921 5911
Telefax +27 (011) 921 5766
Responsible Department QHSE - Nigel, South Africa
+27 (011) 365 8675 (during business hours only)

1.4 Emergency telephone no.

Emergency telephone no. +27 (0861) 555 777 (Western Cape Poisons Helpline)
Global Incident Response Hotline (24h) +1 (760) 476 3964 (Company 3E for Bayer AG, Crop Science Division)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Flammable liquids: Category 3
H226 Flammable liquid and vapour.
Aspiration hazard: Category 1
H304 May be fatal if swallowed and enters airways.
Skin irritation: Category 2
H315 Causes skin irritation.
Eye irritation: Category 2
H319 Causes serious eye irritation.
Specific target organ toxicity - single exposure: Category 3
H336 May cause drowsiness or dizziness.
Acute aquatic toxicity: Category 1
H400 Very toxic to aquatic life.
Chronic aquatic toxicity: Category 1
H410 Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.



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Hazard label for supply/use required.

Hazardous components which must be listed on the label:

- Oxadiazon
- 2-Methylpropan-1-ol
- Solvent Naphtha (petroleum), heavy aromatic,<1% Naphthalene



Signal word: Danger

Hazard statements

- H226 Flammable liquid and vapour.
 H304 May be fatal if swallowed and enters airways.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H336 May cause drowsiness or dizziness.
 H410 Very toxic to aquatic life with long lasting effects.
 EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary statements

- P240 Ground/bond container and receiving equipment.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor/ physician.
 P501 Dispose of contents/container in accordance with local regulation.

2.3 Other hazards

No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical nature

Emulsifiable concentrate (EC)
Oxadiazon 250 g/l

Hazardous components

Hazard statements according to Regulation (EC) No. 1272/2008

Name	CAS-No. / EC-No. / REACH Reg. No.	Classification	Conc. [%]
		REGULATION (EC) No 1272/2008	
Oxadiazon	19666-30-9	Aquatic Acute 1, H400 Aquatic Chronic 1, H410	25,3
Benzenesulfonic acid, mono-C11-13-branched alkyl derivs., calcium salts	68953-96-8	Acute Tox. 4, H312 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411	> 1,00 – < 5,00
2-Methylpropan-1-ol	78-83-1	Flam. Liq. 3, H226 STOT SE 3, H335 Skin Irrit. 2, H315	> 1,00 – < 5,00

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		Eye Dam. 1, H318 STOT SE 3, H336	
Ethoxylated polyarylphenol	99734-09-5	Aquatic Chronic 3, H412	> 1,00 – < 25,00
Cyclohexanone	108-94-1	Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Dam. 1, H318 Flam. Liq. 3, H226	> 1,00 – < 25,00
Solvent Naphtha (petroleum), heavy aromatic, <1% Naphthalene	64742-94-5 01-2119463583-34-xxxx	Asp. Tox. 1, H304 STOT SE 3, H336 Aquatic Chronic 2, H411	> 25,00

Further information

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: FIRST AID MEASURES**4.1 Description of first aid measures****General advice**

Move out of dangerous area. Remove contaminated clothing immediately and dispose of safely. When symptoms persist or in all cases of doubt seek medical advice.

Inhalation

Move the victim to fresh air and keep at rest. If symptoms persist, call a physician.

Skin contact

Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.

Ingestion

Rinse mouth. Keep at rest. Do NOT induce vomiting. Call a physician or poison control center immediately.

4.2 Most important symptoms and effects, both acute and delayed**Symptoms**

No symptoms known or expected.

4.3 Indication of any immediate medical attention and special treatment needed**Risks**

Contains hydrocarbon solvents. May pose an aspiration pneumonia hazard.

Treatment

Local treatment: Initial treatment: symptomatic.

Systemic treatment: Initial treatment: symptomatic. Gastric lavage is not normally required. However, if a significant amount (more than a mouthful) has been ingested, administer activated charcoal and sodium sulphate. There is no specific antidote.



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SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable High volume water jet

5.2 Special hazards arising from the substance or mixture Dangerous gases are evolved in the event of a fire.

5.3 Advice for firefighters

Special protective equipment for firefighters In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.
Further information Remove product from areas of fire, or otherwise cool containers with water in order to avoid pressure being built up due to heat. Whenever possible, contain fire-fighting water by diking area with sand or earth.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Precautions Keep people away from and upwind of spill/leak. Avoid contact with spilled product or contaminated surfaces. Remove all sources of ignition. Use personal protective equipment.

6.2 Environmental precautions Do not allow to get into surface water, drains and ground water.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional advice Check also for any local site procedures.

6.4 Reference to other sections Information regarding safe handling, see section 7.
Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice. Ensure adequate ventilation.

Advice on protection against fire and explosion Keep away from heat and sources of ignition. Vapours may form explosive mixture with air. Take measures to prevent the build up of electrostatic charge. Use only explosion-proof equipment.

Hygiene measures Avoid contact with skin, eyes and clothing. Remove contaminated

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clothing immediately and dispose of safely. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics. When using, do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers Store in a place accessible by authorized persons only. Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from freezing. Keep away from direct sunlight.

Advice on common storage Keep away from food, drink and animal feedingstuffs.

Suitable materials Coex EVOH (1000L IBC)

7.3 Specific end use(s) Refer to the label and/or leaflet.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Oxadiazon	19666-30-9	0,3 mg/m ³ (TWA)		OES BCS*
2-Methylpropan-1-ol	78-83-1	225 mg/m ³ /75 ppm (STEL)	1995	ZA REL
2-Methylpropan-1-ol	78-83-1	150 mg/m ³ /50 ppm (TWA)	1995	ZA REL
Cyclohexanone	108-94-1	100 mg/m ³ /25 ppm (TWA)	1995	ZA REL
Cyclohexanone	108-94-1	400 mg/m ³ /100 ppm (STEL)	1995	ZA REL

*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

8.2 Exposure controls**Respiratory protection**

Wear respirator with an organic vapours and gas filter mask (protection factor 10) conforming to EN140 type A or equivalent. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's instructions regarding wearing and maintenance.

Hand protection

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.

Material	Nitrile rubber
Rate of permeability	> 480 min
Glove thickness	> 0,4 mm
Protective index	Class 6



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<p>Eye protection</p> <p>Skin and body protection</p>	<p>Directive</p> <p>Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).</p> <p>Wear standard coveralls and Category 3 Type 6 suit. If there is a risk of significant exposure, consider a higher protective type suit. Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and should be professionally laundered frequently. If chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully remove and dispose of as advised by manufacturer.</p>	<p>Protective gloves complying with EN 374.</p>
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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form	Liquid
Colour	yellow to red-brown
Odour	aromatic
pH	4,0 - 6,0 at 1 % (23 °C) (deionized water)
Flash point	45 - 56 °C
Ignition temperature	> 450 °C The data refer to solvent naphtha petroleum.
Auto-ignition temperature	430 °C
Density	ca. 0,99 g/cm ³ at 20 °C
Water solubility	miscible
Partition coefficient: n-octanol/water	Cyclohexanone: log Pow: 0,81

9.2 Other information Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Thermal decomposition Stable under normal conditions.

10.2 Chemical stability Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions No hazardous reactions when stored and handled according to prescribed instructions.



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- 10.4 Conditions to avoid** Extremes of temperature and direct sunlight.
- 10.5 Incompatible materials** Store only in the original container.
- 10.6 Hazardous decomposition products** No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity	LD50 (Rat) > 2.000 mg/kg
Acute inhalation toxicity	LC50 (Rat) > 5,04 mg/l Exposure time: 4 h
Acute dermal toxicity	LD50 (Rat) > 2.000 mg/kg
Skin irritation	Irritating to skin. (Rabbit)
Eye irritation	Irritating to eyes. (Rabbit)
Sensitisation	Non-sensitizing. (Guinea pig) OECD Test Guideline 406, Buehler test

Assessment STOT Specific target organ toxicity – single exposure

Oxadiazon: Based on available data, the classification criteria are not met.

Cyclohexanone: Based on available data, the classification criteria are not met.

Assessment STOT Specific target organ toxicity – repeated exposure

Oxadiazon caused specific target organ toxicity in experimental animal studies in the following organ(s): Liver, Blood. The observed effects do not appear to be relevant for humans.

Cyclohexanone did not cause specific target organ toxicity in experimental animal studies.

Assessment mutagenicity

Oxadiazon was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

Cyclohexanone was not mutagenic or genotoxic based on the overall weight of evidence in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Oxadiazon caused at high dose levels an increased incidence of tumours in the following organ(s): Liver. The mechanism that triggers tumours in rodents and the type of tumours observed are not relevant to humans.

Cyclohexanone is not considered carcinogenic.

Assessment toxicity to reproduction

Oxadiazon caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Oxadiazon is related to parental toxicity.

Cyclohexanone did not cause reproductive toxicity in a two-generation study in rats.

Assessment developmental toxicity

Oxadiazon caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Oxadiazon are related to maternal toxicity.

Cyclohexanone did not cause developmental toxicity in rats and rabbits.

Aspiration hazard



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|| May be fatal if swallowed and enters airways.

Further information

The toxicological data refer to a similar formulation.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)) 1,2 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient oxadiazon.

Toxicity to aquatic invertebrates EC50 (Daphnia magna (Water flea)) > 2,4 mg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient oxadiazon.

Toxicity to aquatic plants EC50 (Desmodesmus subspicatus (green algae)) 0,028 mg/l
Biomass; Exposure time: 72 h

12.2 Persistence and degradability

Biodegradability Oxadiazon:
Not rapidly biodegradable
Cyclohexanone:
rapidly biodegradable

Koc Oxadiazon: Koc: 1294
Cyclohexanone: Koc: 15,15

12.3 Bioaccumulative potential

Bioaccumulation Oxadiazon: Bioconcentration factor (BCF) 243
Does not bioaccumulate.
Cyclohexanone: Bioconcentration factor (BCF) 129
Does not bioaccumulate.

12.4 Mobility in soil

Mobility in soil Oxadiazon: Slightly mobile in soils
Cyclohexanone: Mobile in soils

12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment Oxadiazon: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).
Cyclohexanone: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

12.6 Other adverse effects

Additional ecological information No other effects to be mentioned.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods



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Product	In accordance with current regulations and, if necessary, after consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant.
Contaminated packaging	Triple rinse containers. Do not re-use empty containers. Not completely emptied packagings should be disposed of as hazardous waste.

SECTION 14: TRANSPORT INFORMATION

SANS 10231

14.1 UN number	1993
14.2 Proper shipping name	FLAMMABLE LIQUID, N.O.S. (OXADIAZON, CYCLOHEXANONE SOLUTION)
14.3 Transport hazard class(es)	3
14.4 Packing group	III
14.5 Environm. Hazardous Mark	YES

IMDG

14.1 UN number	1993
14.2 Proper shipping name	FLAMMABLE LIQUID, N.O.S. (OXADIAZON, CYCLOHEXANONE SOLUTION)
14.3 Transport hazard class(es)	3
14.4 Packing group	III
14.5 Marine pollutant	YES

IATA

14.1 UN number	1993
14.2 Proper shipping name	FLAMMABLE LIQUID, N.O.S. (OXADIAZON, CYCLOHEXANONE SOLUTION)
14.3 Transport hazard class(es)	3
14.4 Packing group	III
14.5 Environm. Hazardous Mark	NO

14.6 Special precautions for user

See sections 6 to 8 of this Safety Data Sheet.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

No transport in bulk according to the IBC Code.

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Further information

WHO-classification: III (Slightly hazardous)

SECTION 16: OTHER INFORMATION

Text of the hazard statements mentioned in Section 3

H226 Flammable liquid and vapour.

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H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Abbreviations and acronyms

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
Conc.	Concentration
EC-No.	European community number
ECx	Effective concentration to x %
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
EN	European Standard
EU	European Union
IATA	International Air Transport Association
IBC	International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code)
ICx	Inhibition concentration to x %
IMDG	International Maritime Dangerous Goods
LCx	Lethal concentration to x %
LDx	Lethal dose to x %
LOEC/LOEL	Lowest observed effect concentration/level
MARPOL	MARPOL: International Convention for the prevention of marine pollution from ships
N.O.S.	Not otherwise specified
NOEC/NOEL	No observed effect concentration/level
OECD	Organization for Economic Co-operation and Development
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

The information contained within this Safety Data Sheet is in accordance with the guidelines established by Regulation (EU) 1907/2006 and Regulation (EU) 2015/830 amending Regulation (EU) No 1907/2006 and any subsequent amendments. This data sheet complements the user's instructions, but does not replace them. The information it contains is based on the knowledge available about the product concerned at the time it was compiled. Users are further reminded of the possible risks of using a product for purposes other than those for which it was intended. The required information complies with current EEC legislation. Addressees are requested to observe any additional national requirements.

SAFETY DATA SHEET according to Regulation (EC) No. 1907/2006



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Reason for Revision:

Safety Data Sheet according to Regulation (EU) No. 2015/830. Section 2: Hazards Identification. Section 3: Composition / Information on Ingredients. Section 4: First Aid Measures. Section 8: Exposure Controls / Personal Protection. Section 11: Toxicological information on STOT (Specific Target Organ Toxicity) and CMR (Carcinogenic, Mutagenic and toxic to Reproduction). Section 12. Ecological information.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.